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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Achim Hilgers

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EXAMINER

NGUYEN, HOANG V

ART UNIT

PAPER NUMBER

2821

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/591,543	Applicant(s) HILGERS, ACHIM	
	Examiner HOANG V. NGUYEN	Art Unit 2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11, 16 and 17 is/are rejected.
- 7) ☒ Claim(s) 12-15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/1/06</u> . | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 4 and 6-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Carr (US 3,099,836).

Regarding claim 1, Carr (Figure 1) discloses an antenna configuration which has a first antenna arm 10 and a second antenna arm 20 wherein each of the two antenna arms is made of electrically conductive material and has a first end and a second end and has a longitudinal direction which runs from the first end to the second end and wherein the two first ends are arranged at a first distance from one another and adjacent to one another and are in each case intended and designed for electrically conductive connection to a terminal of a signal sink or of a signal source and wherein the two second ends are arranged at a second distance from one another and remote from one another, said second distance being greater than the first distance, and wherein the two longitudinal directions of the two antenna arms enclose an acute opening angle with one another, and wherein the acute opening angle as a value of between 15° and 90°.

Regarding claim 4, as applied to claim 1, Figure 1 of Carr shows that the two antenna arms are designed to run in a straight line.

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Regarding claim 6, as applied to claim 1, Figure 3 of Carr shows at least one coupling web 55 is provided in order to electromagnetically couple the two antenna arms which coupling web is made of electrically conductive material and extends at least over a region lying between the two antenna arms and is electrically isolated from the two antenna arms.

Regarding claim 7, as applied to claim 6, Figure 3 of Carr shows that the at least one coupling web is arranged to run transversely to the angle half-line of the acute opening angle between the longitudinal directions of the two antenna arms.

Regarding claim 8, as applied to claim 7, Figure 3 of Carr shows that the at least one coupling web is arranged to run perpendicular to the angle half-line of the acute opening angle between the longitudinal directions of the two antenna arms.

Regarding claim 9, as applied to claim 6, Figure 3 of Carr shows that a number of coupling webs are provided, which coupling webs have increasing lengths as the distance from the first ends of the two antenna arms increases.

Regarding claim 10, as applied to claim 6, Figure 3 of Carr shows that the at least one coupling web is designed to run in a straight line.

Regarding claim 11, as applied to claim 6, Figure 3 of Carr shows that the at least one coupling web has the form of a narrow strip.

3. Claims 1, 5, 16 and 17 are rejected under 35 U.S.C. 102(e) as being anticipated by Forster et al (US 7,375,699 B2).

Regarding claim 1, Forster (Figure 3) discloses an antenna configuration which has a first antenna arm 21A and a second antenna arm 21B wherein each of the two antenna arms is made of electrically conductive material and has a first end and a second end and has a longitudinal

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direction which runs from the first end to the second end and wherein the two first ends are arranged at a first distance from one another and adjacent to one another and are in each case intended and designed for electrically conductive connection to a terminal of a signal sink or of a signal source and wherein the two second ends are arranged at a second distance from one another and remote from one another, said second distance being greater than the first distance, and wherein the two longitudinal directions of the two antenna arms enclose an acute opening angle with one another, and wherein the acute opening angle as a value of between 15° and 90°.

Regarding claim 5, as applied to claim 1, Figure 3 of Forster shows that the two antenna arms are designed to run in a meandering manner.

Regarding claim 16, as applied to claim 1, Figure 6A of Forster shows that the antenna configuration is intended and designed for use in a contactless data carrier for contactless communication with a communication station, which data carrier contains an IC and the antenna configuration.

Regarding claim 17, Figure 6A of Forster discloses a data carrier for contactless communication with a communication station, characterized in that the data carrier is provided with an antenna configuration as claimed in claim 1.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Carr.

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Carr discloses the claimed invention except explicitly mentioning that the acute opening angle has a value of 30° and 10 %. It would have been obvious to one having ordinary skill in the art at the time the invention was made to configure the acute opening angle to have a value of 30° and 10 %, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

6. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Carr in view of Hollman (US 2,227,088).

Carr discloses the claimed invention except mentioning that the acute opening angle has a value of between 25° and 45°. Hollman (Figure 2) discloses antenna configuration having a first antenna arm and a second antenna arm wherein the two longitudinal directions of the two antenna arms enclose an acute opening angle with one another, and wherein the acute opening angle has a value between 25° and 45°. It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ Carr's antenna device with a configuration wherein the acute opening angle has a value of between 25° and 45°, as taught by Hollman, doing so would generate a desired antenna characteristics suitable for a specific application.

Allowable Subject Matter

7. Claims 12-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter:

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Regarding claim 12, Carr fails to specifically teach, in combination with other limitations, that the at least one coupling web has the form of a wide plate.

Regarding claim 13, Carr fails to further teach, in combination with other limitations, that the at least one coupling web extends over the region lying between the two antenna arms and beyond the two antenna arms.

Regarding claim 14, neither Carr nor Forster further teaches, in combination with other limitations, that the two antenna arms, with respect to a substrate for the two antenna arms, are provided on opposite side surfaces of the substrate.

Regarding claim 15, Carr fails to further teach, in combination with other limitations, that the two antenna arms, with respect to a substrate for the two antenna arms, are provided together on a first side surface of the substrate, and wherein the at least one coupling web is provided on the opposite, second side surface of the substrate.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 2,710,916 discloses an antenna comprising first and second antenna arms enclosing an acute opening angle.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HOANG V. NGUYEN whose telephone number is (571)272-1825. The examiner can normally be reached on Mondays-Fridays from 9:00 a.m. to 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas Owens can be reached on (571) 272-1662. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hoang V Nguyen/
Primary Examiner, Art Unit 2821